South Carolina — Grade 8

FlyBy Math™ Alignment
Mathematics Curriculum Standards
Content Standards

NUMBER AND OPERATIONS	
Standard I. Understand numbers, ways of representing numbers, relationships among numbers, and number systems.	
Expectation A. Work flexibly with fractions, decimals, and percents to solve problems..	
1. Solve real-world problems involving fractions, decimals, and percents.	***FlyBy Math*™ Activities** --Apply mathematics to solving distance, rate, and time problems for aircraft conflict scenarios.
Standard III. Compute fluently and make reasonable estimates.	
Expectation D. Develop, analyze, and explain methods for solving problems involving proportions, such as scaling and finding equivalent ratios.	
*2. Use proportional reasoning to solve applied problems and then justify the solution.	***FlyBy Math*™ Activities** --Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.

ALGEBRA	
Standard I. Understand patterns, relations, and functions.	
Expectation B. Relate and compare different forms of representations for a relationship.	
1. Describe the merits and limitations of graphical, symbolic, and tabular representations.	***FlyBy Math*™ Activities** --Choose among tables, bar graphs, line graphs, a Cartesian coordinate system, and equations to model aircraft conflicts and predict outcomes.
Standard II. Represent and analyze mathematical situations and structures using algebraic symbols.	
Expectation B. Explore relationships between symbolic expressions and graphs of lines, paying particular attention to the meaning of intercept and slope.	
1. Explain the impact of coefficients and constants on linear equations as they reflect simple applications.	***FlyBy Math*™ Activities** --Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates. --Interpret the slope of a line in the context of a distance-rate-time problem.

Standard IV. Analyze change in various contexts.	
Expectation A. Use graphs to analyze the nature of changes in quantities in linear relationships.	
1. Use tables and graphs to model and analyze linear relationships between variables.	***FlyBy Math™* Activities** --Use graphs to compare airspace scenarios for both the same and different starting conditions and the same and different constant (fixed) rates.

MEASUREMENT	
Standard II. Apply appropriate techniques, tools, and formulas to determine measurements.	
Expectation F. Solve simple problems involving rates and derived measurements for such attributes as velocity and density.	
1. Use measurements and formulas to solve real-world and mathematical problems.	***FlyBy Math™* Activities** --Use calculations and experimental evidence to predict, describe, and explain several aircraft conflict problems. --Use the distance-rate-time formula to predict and analyze aircraft conflicts.